The revised restoration plan specified a rock step pool transition across the face of the embankment to provide grade control and prevent stream channel down-cutting, and to facilitate aquatic life movement. The step pool structures failed because the step pools were constructed without footer rock and inadequately sized rock was used. The channel down-cutting across the embankment has propagated upstream of the embankment causing a headcut of several feet in the stream channel adjacent to WMA A. In addition to the accelerated channel and bank erosion, the continued downcutting of Long Run adjacent to WMA A will likely drain portions of the wetland and reduce wetland acreage over time. CEC recommends that the down-cut portion of Long Run be restored and stabilized using a series of substantial rock cross vanes. A restoration design for this stream reach has been prepared and is shown in the enclosed Drawing C300.

Beaver activity in both Long Run and Piney Creek within the riparian enhancement areas has converted substantial portions of the restoration reaches from riffle/run habitat to pool/glide habitat. Beaver have also browsed woody plantings both along the stream and in the WMAs. Vegetation has partially recovered from these impacts, but beaver continue to browse the vegetation.

3.4.2 Qualitative Habitat Evaluation Index

Because of the low flow conditions during the November monitoring event, stream habitat in only two of the larger of the six assessment streams – Piney Creek South and Long Run - were assessed using the Ohio EPA's QHEI protocol. All of the QHEI assessment streams will be evaluated during the May 2011 monitoring event, when stream flows are greater. The habitat assessment forms are presented in Appendix D and the results are summarized in the tables, below.

Piney Creek South - Qualitative Habitat Evaluation Index	
Habitat Parameter	2010 Score
1. Substrate	16
2. Instream Cover	14
3. Channel Morphology	16
4. Bank Erosion and Riparian Zone	9
5.a. Pool/Glide Quality	6